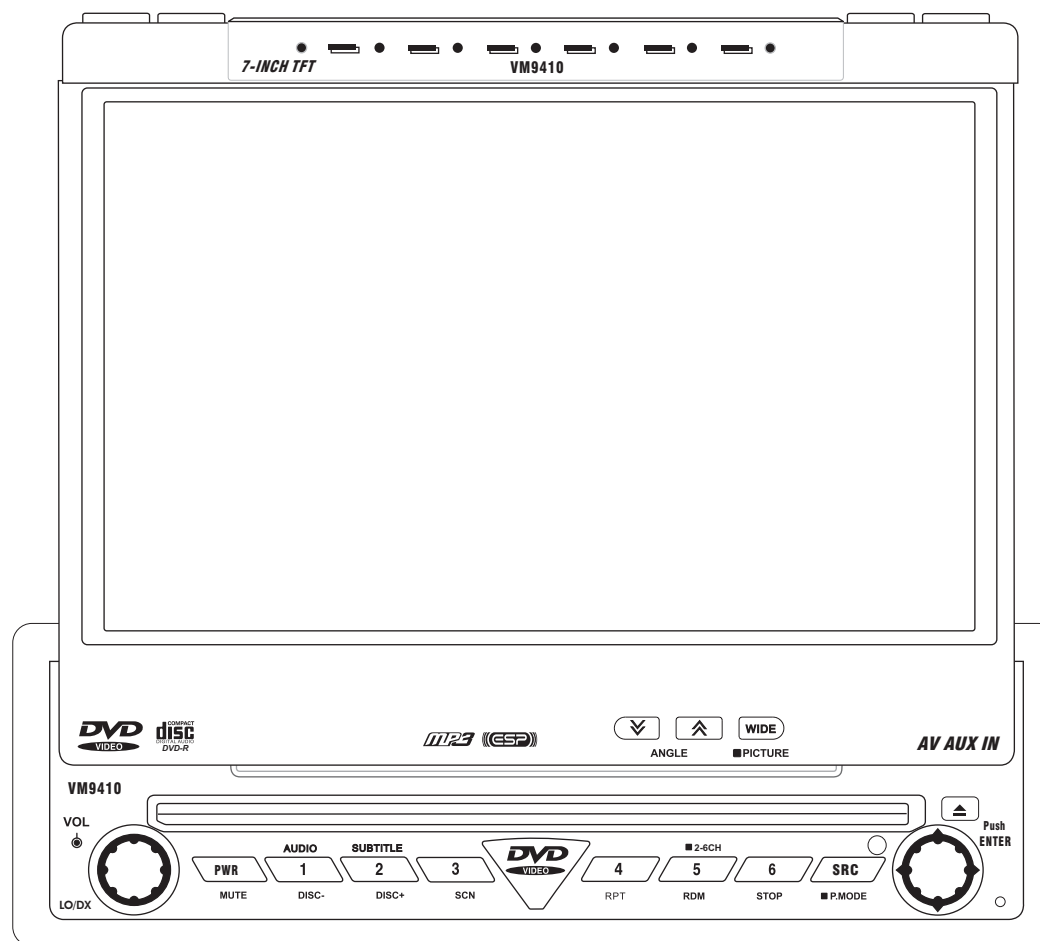




VM9410

Owner's Manual



CONTENTS

Thank you for choosing a Jensen product. We hope you will find the instructions in this owner's manual clear and easy to follow. If you take a few minutes to look through it, you'll learn how to use all the features of your new Jensen VM9410 Mobile Multimedia AM/FM/DVD Receiver for maximum enjoyment.

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PREPARATION

Congratulations on your purchase of the Jensen VM9410 Mobile Multimedia AM/FM/DVD Receiver.

It's a good idea to read all of the instructions before beginning the installation. We recommend having your Jensen VM9410 installed by a reputable installation shop.

Features

1. 1 DIN Size.
2. Ultra slim slot-in DVD core mechanism.
3. 7 inch Panasonic TFT monitor.
4. Built-in 4X40W power amplifier audio output.
5. Multi-zone independent playing with a maximum of 3-zone independent playing (eg. Front Zone: radio as the background; Rear Zone: playback DVD).
6. Supports optional external CD changer.
 - Select previous/next disc.
 - Playback previous/next chapter.
 - Direct track/chapter selection.
 - Single track/chapter and disc replay.
 - Random playback/scan.
7. AM/FM tuner.
 - Auto/Manual search for radio station and pre-set station memory.
 - 30 pre-set radio stations (12 AM/18 FM).
 - Distant/Local radio station seeking.
8. Multiple video System with Auto/Manual PAL and NTSC video system selection.
9. Dual LCD Display.
10. Wide screen TFT display and segment LCD display.
11. FULL, WIDE, and NORMAL screen modes.
12. TFT automatic mechanism – Simply press a button to adjust the TFT monitor display angle in full range or step by step. Last position memory recalls your favorite viewing position.
13. Auto-activated rear view video camera – Reverse driving automatically activates the TFT monitor and the rear view video camera; the Image captured from the camera is displayed.
14. TFT monitor mechanism overload protection – If the TFT monitor becomes overloaded by a blocked or unclear moving path, its motion is ceased automatically to protect the mechanism.
15. Fully compatible with CDDA, VCD, SVCD, CD-R, CD-RW and DVD.
16. Multi-language, multi-subtitle, and multi-angle playback options.

17. Last Playback Memory – When powering on the unit, every setting and playing status remains the same as when the unit was powered off.
18. Parental lock – Uses a password and disc-rating setup to prevent unauthorized user access to irrelevant display content.
19. Mute function – Automatically lower/mute the volume when a dedicated external device such as GPS system or car phone is active.
20. Joystick (5-way) control – The joystick provides easy navigational control via a 4-directional control with a clickable center control.
21. Rotary volume control.
22. Two independent full function IR remote controls – one for the front zone, the other for the rear zone, without interference.
23. Voltage overload and underloaded protection – The operating voltage of this unit is between 10.5V and 16V. Any supplied voltage out of this range causes the unit to power off automatically to ensure normal operation in any circumstance.
24. Mechanical anti-vibration system + electronic shock protection – mechanical anti-vibration system accompanied by a 16Mbit electronic shock protection promotes the smoothest disc playback possible, even under the toughest road conditions.

Tools and Supplies

You will need these tools and supplies to install your VM9410:

- Torx type, flat-head and Philips screwdrivers
- Wire cutters and strippers
- Tools to remove existing radio (screwdriver, socket wrench set or other tools)
- Electrical tape
- Crimping tool
- Volt meter/test light
- Crimp connections
- 18 gauge wire for power connections
- 16 – 18 gauge speaker wire

WARNING! Only connect the unit to a 12-volt power supply with proper grounding.

WARNING! Never install this unit where operation and viewing could interfere with safe driving conditions.

WARNING! To reduce the risk of a traffic accident (except when using for rear view video camera) never use the video display function while driving the vehicle. This is a violation of federal law.

WARNING! Never disassemble or adjust the unit without the assistance of a professional. For details, please consult your local car stereo specialty shop.

WARNING! To prevent injury from shock or fire, never expose this unit to moisture or water.

WARNING! Never use irregular discs.

WARNING! To prevent damage to the mechanism inside this unit, avoid impact to the TFT monitor.

WARNING! Do not change the fuse on the power cord without professional guidance. Using an improper fuse may cause damage to the unit and result in a fire.

WARNING! To prevent damage to the screen, avoid touching it with your fingers or other objects.

WARNING! The monitor employs an automatic motorized mechanism. To prevent damage to the core mechanism, please do not push, pull or swivel the monitor manually.

Disconnecting the Battery

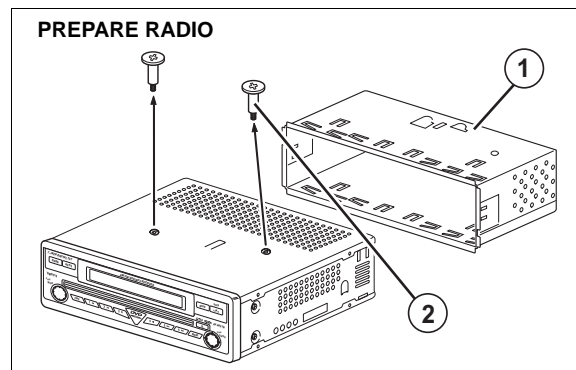
To prevent a short circuit, be sure to turn off the ignition and remove the negative (-) battery cable prior to installation.

NOTE: If the VM9410 is to be installed in a car equipped with an on-board drive or navigation computer, do not disconnect the battery cable. If the cable is disconnected, the computer memory may be lost. Under these conditions, use extra caution during installation to avoid causing a short circuit.

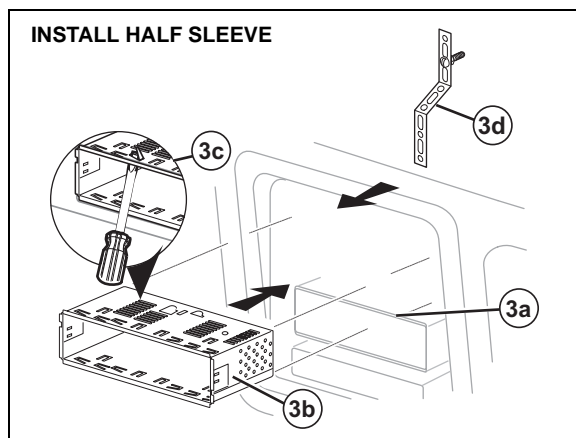
INSTALLATION

Pre-installation

1. Press the metal levers on both sides to remove the half-sleeve from the radio.
2. Remove the transport screws.



3. Install the half-sleeve.
 - a. Install adapter if necessary (optional).
 - b. Install half-sleeve into adapter or dashboard (only use the supplied screws). Do not force the sleeve into the opening or cause it to bend or bow.
 - c. Locate the series of bend tabs along the top, bottom and sides of the mounting sleeve. With the sleeve fully inserted into the dashboard opening, bend as many of the tabs outward as necessary so that the sleeve is firmly secured to the dashboard.
 - d. Install support strap to make the unit more stable.



CAUTION! Be careful not to damage the car wiring.

4. Place the radio in front of the dashboard opening so the wiring can be brought through the mounting sleeve.

Wiring

Complete wiring as illustrated in the wiring diagram on page 3. Once the wiring is complete, reconnect the battery negative terminal. If there is no ACC available, connect the ACC lead to the power supply with a switch.

NOTE: When replacing a fuse, be sure to use correct type and amperage to avoid damaging the radio. The VM9410 uses one 10 amp mini-ATM fuse, located in the black filter box in-line with the main wire harness.

Final Installation

After completing the wiring connections, turn the unit on to confirm operation (ignition switch must be on). If unit does not operate, recheck all wiring until problem is corrected. Once proper operation is achieved, turn off the ignition switch and proceed with final mounting of the chassis.

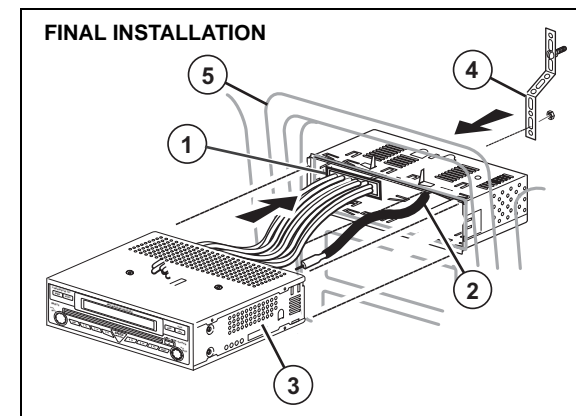
1. Connect wiring adapter to existing wiring harness.
2. Connect antenna lead.
3. Carefully slide the radio into the half-sleeve making sure it is right-side-up until it is fully seated and the spring clips lock it into place.

NOTE: For proper operation of the CD/DVD player, the chassis must be mounted within 20° of horizontal. Make sure the unit is mounted within this limitation.

4. Attach one end of the perforated support strap (supplied) to the screw stud on the rear of the chassis using the hex nut provided. Fasten the other end of the perforated strap to a secure part of the dashboard either above or below the radio using the screw and hex nut provided. Bend the strap to position it as necessary.

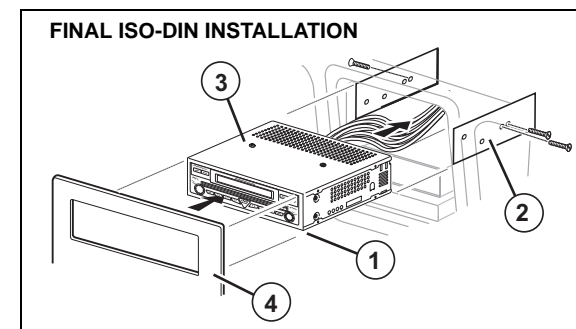
CAUTION! The rear of the radio must be supported with the strap to prevent damage to the dashboard from the weight of the radio or improper operation due to vibration.

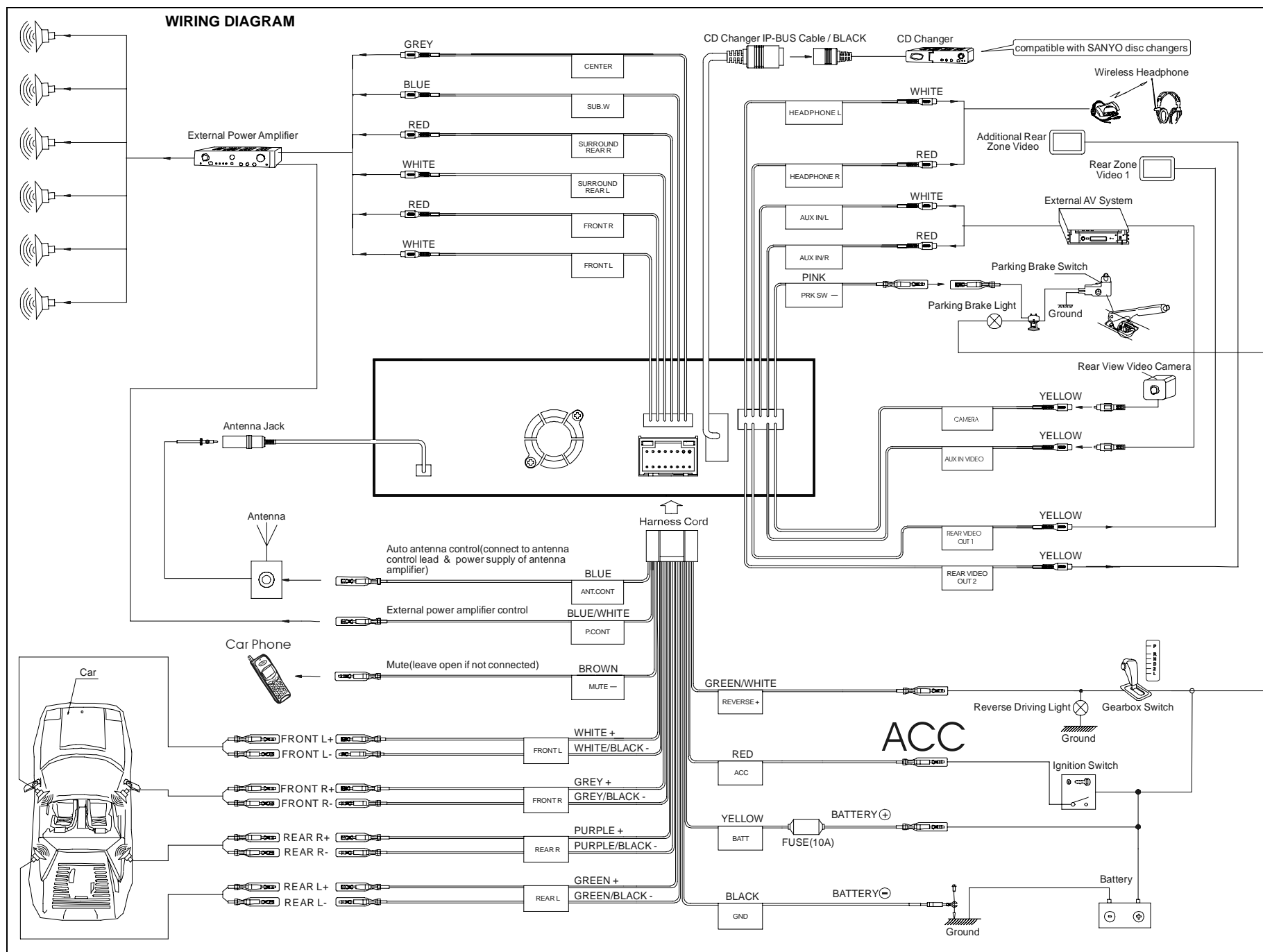
5. Replace any items you removed from the dashboard.



Final ISO-DIN Installation

1. Remove trim ring.
2. Mount factory brackets on new radio using existing screws from old radio.
3. Slide radio chassis into dash opening and secure.
4. Reinstall dash panel.





CONTROLS AND INDICATORS

Button Operation

1. OPEN

Press the **OPEN** button (1) to activate the automatic mechanical system and move the TFT monitor into viewing position.

2. WIDE/PICTURE

Press the **WIDE/PICTURE** button (2) to adjust the display aspect of the picture to one of three settings: Wide, Full or Normal.

3. (▲)

Press the ▲ button (3) to adjust the upward tilt angle of the screen one step at a time. *Press and hold* this button to *continuously* adjust the upward tilt.

4. (▼)

Press the ▼ button (4) to adjust the downward tilt angle of the screen one step at a time. *Press and hold* this button to *continuously* adjust the downward tilt.

5. DSP

Press the **DSP** button (5) to display system information on the screen. *Press and hold* this button to enter/exit System Function set-up.

6. SEL/LOC/DX

Rotate the **SEL/LOC/DX** knob (6) to adjust the volume. *Press and release* to enter and/or confirm audio settings. *Press and hold* to activate the Local (LOC) setting.

7. POWER/MUTE

Press the **POWER/MUTE** button (7) once to turn the unit on. Press again to mute the volume. *Press and hold* to turn the unit off.

8. 1/DISC-

DVD Mode: Press to select audio language during playback.

TUNER Mode: Press once to play preset radio station channel 1. *Press and hold* to store the current radio station in preset channel 1.

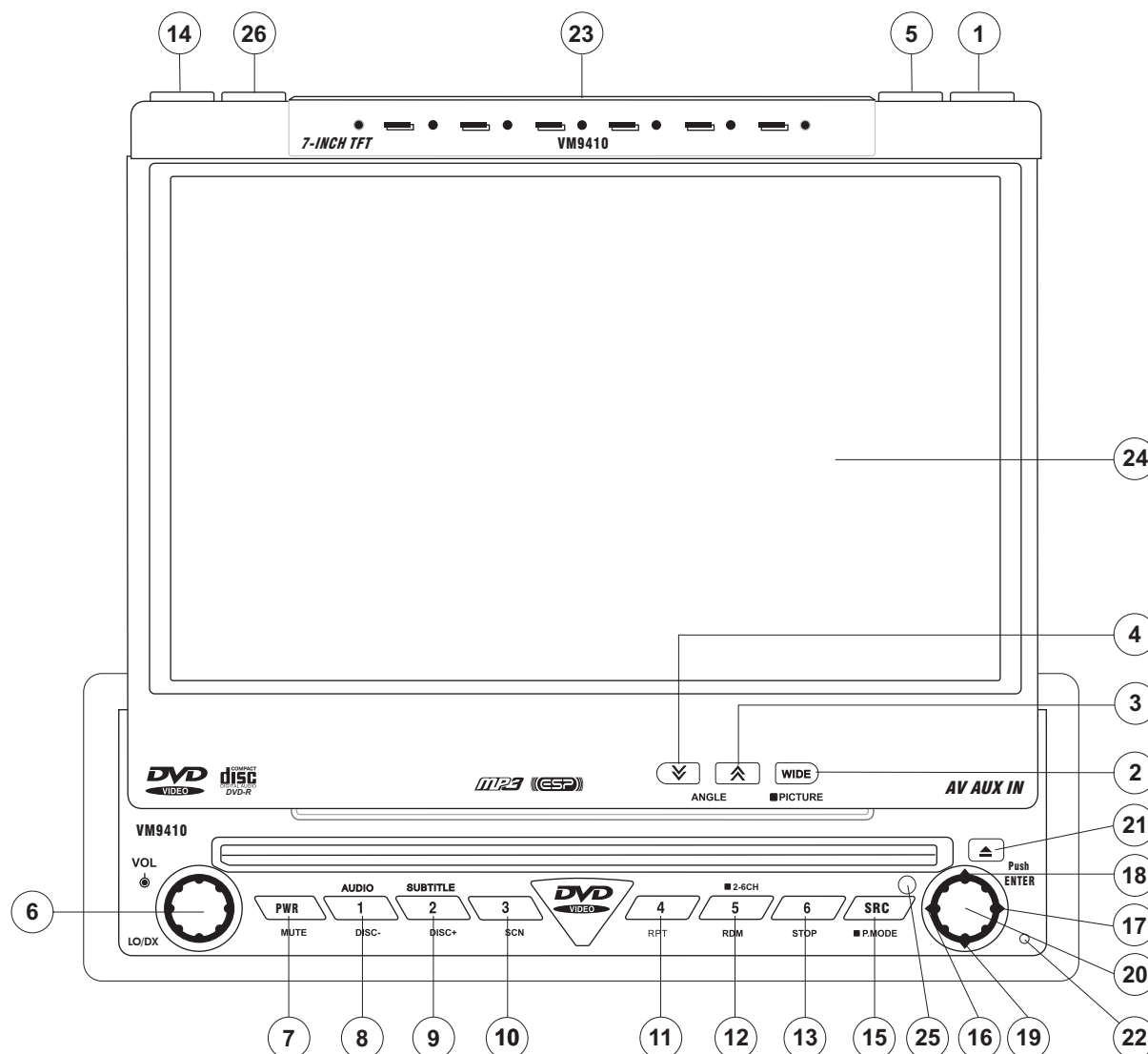
CDC Mode: Press to play the previous disc.

9. 2/DISC+

DVD Mode: Press once to select the subtitle language during playback.

TUNER Mode: Press once to play preset radio station channel 2. *Press and hold* to store the current radio station in preset channel 2.

CDC Mode: Press to play the next disc.



CONTROLS AND INDICATORS

10. 3/SCN

DVD Mode: Press once to start scan playback.

TUNER Mode: Press once to play preset radio station channel 3. *Press and hold* to store the current radio station in preset channel 3.

11. 4/REP

DVD Mode: Press once to start repeat playback.

TUNER Mode: Press once to play preset radio station channel 4. *Press and hold* to store the current radio station in preset channel 4.

12. 5/2-6CH/RDM

DVD Mode: Press once for random playback.

TUNER Mode: Press once to play preset radio station channel 5. *Press and hold* to store the current radio station in preset channel 5.

CD Mode: *Press and hold* to switch between 2 channel & 6 channel audio output.

13. 6/STOP

DVD Mode: Press once to stop playback.

TUNER Mode: Press once to play preset radio station channel 6. *Press and hold* to store the current radio station in preset channel 6.

14. AF/BAND/PAUSE

DVD Mode: Press to pause playback.

TUNER Mode: Press to switch between FM and AM.

15. SRC/P.MODE

Press once to select playing mode.

Press and hold to toggle rear zone mode On/Off.

16. (◀)

DVD Mode: Press once to play back previous chapter/track.

TUNER Mode: Press once to auto search for the previous available radio station. *Press and hold* to decrease the tuning frequency step by step.

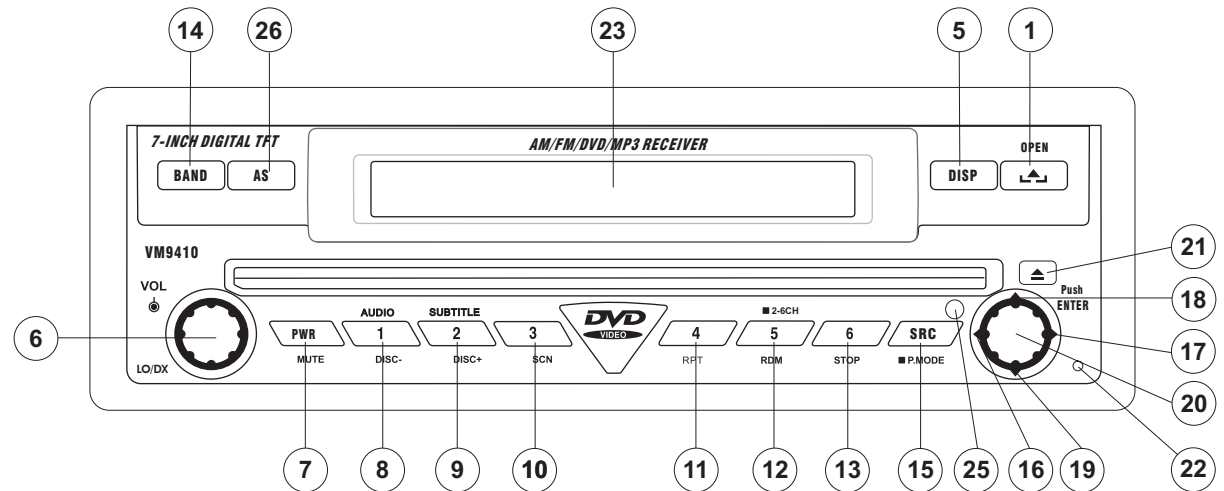
MENU Mode: Press once to move the cursor to the left.

17. (▶)

DVD Mode: Press once to enter the next chapter or track.

TUNER Mode: Press once to auto-search the next available radio station. *Press and hold* to increase tuning frequency step by step.

MENU Mode: Press once to move the cursor to the right.



18. (▲)

DVD Mode: Press once for fast forward/fast reverse.

MENU Mode: Press once to move the cursor up.

19. (▼)

DVD Mode: Press once for slow forward/slow reverse.

MENU Mode: Press once to move the cursor down.

20. PLAY/ENTER

DVD Mode: Press once to start a playback.

Press once to confirm a selection.

21. (▲)

Press once for disc insertion/ejection.

Press and hold to reset core mechanism position.

22. RESET

Press to reset system settings to factory default (except the password and parental lock setting).

23. LCD Display

24. TFT Display

25. IR Remote Control Receiver

26. AS (Auto Store/Preset Scan)

Press once to scan current radio station.

Press and hold to auto store strong radio stations in the six preset channels.

CONTROLS AND INDICATORS

LCD Display/Indicators

1. Disc Indicator

Illuminated when disc is loaded

2. DVD Playback Indicators (SCN/RPT/RDM/ALL)

The following DVD playback indicators become illuminated when the corresponding function is active:

- SCN: scan playback
- RPT: repeat playback
- RDM: random playback
- ALL: playback all chapters

3. Loudness Indicator (LOUD)

The loudness indicator becomes illuminated when the LOUD function is activated.

4. Main Display

The main display is an 8 digit, 14 segment LCD which displays the time, tuning frequency and other text information.

5. Channel/Disc Display

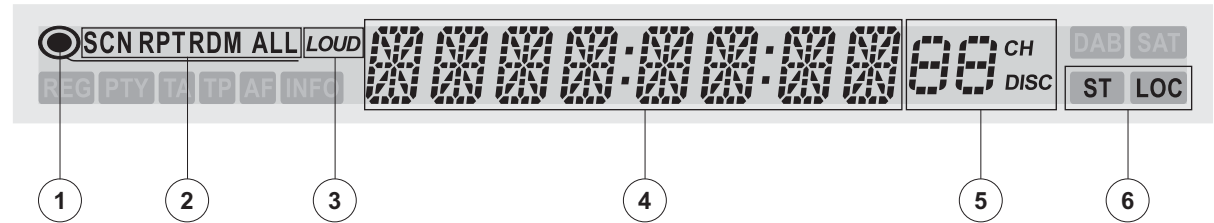
The channel/disc display is a 2 digit, 7 segment LCD display which displays the disc number or radio channel indicators when the corresponding function is active:

- CH: radio is activated
- DISC: DVD or CDC mode is activated

6. Stereo/Local Indicator

The stereo/local indicator illuminates one of the following indicators when the corresponding function is active:

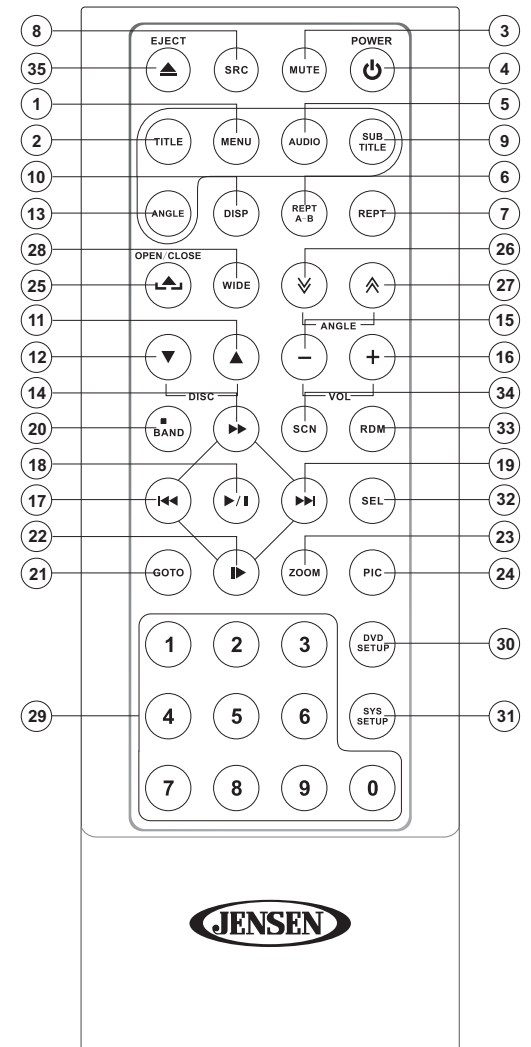
- ST: radio is in stereo mode
- LOC: local radio station seeking function is activated



FRONT ZONE REMOTE CONTROL

Table 1: Front Zone Remote Control Functions

Button		Function				
Name	Ref #	DVD	VCD	CDC	TUNER	CD/MP3
MENU	1	Enters the main menu of the disc	Turns on PBC when playing VCD			
TITLE	2	Enters the title menu of the disc	Plays first ten seconds of each chapter/title			
MUTE	3	Toggles on/off audio output	Toggles on/off audio output	Toggles on/off audio output	Toggles on/off audio output	Toggles on/off audio output
POWER/⏻	4	Turns the power on/off	Turns the power on/off	Turns the power on/off	Turns the power on/off	Turns the power on/off
AUDIO	5	Changes the audio language for disc playback				
REPT A-B	6	Setup to repeat playback from time frame A to time frame B	Setup to repeat playback from time frame A to time frame B			
REPT	7	Repeats playback of current chapter	Repeats playback of current chapter	Repeats playback of current track		Repeats playback of current track
SRC	8	Selects playing mode	Selects playing mode	Selects playing mode	Selects playing mode	Selects playing mode
SUBTITLE	9	Language selection for subtitle				
DISP	10	Displays playing information	Displays playing information	Displays playing information	Displays playing information	Display playing information
DISC ▲	11			Plays previous disc		
DISC ▼	12			Plays next disc		
ANGLE	13	Plays back disc in different angle for a scene	Plays back Picture CD with different angle of picture displayed	Plays back disc in different angle for a scene		
▶▶	14	Fast forwards the disc content	Fast forwards the disc content	Fast forwards the disc content	Fast forwards the disc content	Fast forwards the disc content
VOL -	15	Decreases volume	Decreases volume	Decreases volume	Decreases volume	Decreases volume
VOL +	16	Increases volume	Increases volume	Increases volume	Increases volume	Increases volume
◀◀	17	Selects the previous chapter for playback	Selects the previous chapter for playback	Selects the previous track for playback	Searches an available radio station by decreasing tuning frequency	Selects the previous track for playback
▶/II	18	Pauses playback/starts playback	Pauses playback/starts playback	Pauses playback/starts playback	Scans FM/AM radio station; plays/stores radio station; deletes radio station	Pauses playback/starts playback
▶▶	19	Selects the next chapter for playback	Selects the next chapter for playback	Selects the next track for playback	Searches an available radio station by increasing tuning frequency	Selects the next track for playback
■/BAND	20	Stops playback	Stops playback	Stops playback	Selects FM/AM band	Stops playback
GOTO	21	Goes to specific time frame and playback	Goes to specific time frame and playback			



NOTE: Your remote control may differ slightly from the one pictured here. The above diagram is for illustrative purposes only.

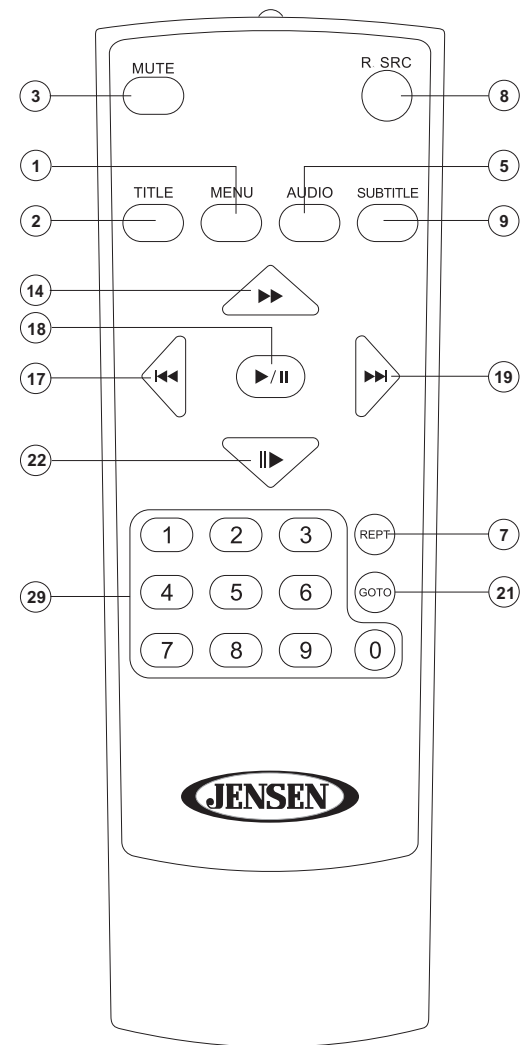
Table 1: Front Zone Remote Control Functions

Button		Function				
Name	Ref #	DVD	VCD	CDC	TUNER	CD/MP3
⏮	22	Slow playback/slow rewind playback	Slow playback/slow rewind playback			
ZOOM	23	Zooms in/out on an image	Zooms in/out on an image			
PIC	24	Displays set-up parameters	Displays set-up parameters			
OPEN/CLOSE	25	Opens/Closes the TFT monitor	Opens/Closes the TFT monitor	Opens/Closes the TFT monitor	Opens/Closes the TFT monitor	Opens/Closes the TFT monitor
⏴	26	Decreases monitor tilt angle	Decreases monitor tilt angle	Decreases monitor tilt angle	Decreases monitor tilt angle	Decreases monitor tilt angle
⏵	27	Increases monitor tilt angle	Increases monitor tilt angle	Increases monitor tilt angle	Increases monitor tilt angle	Increases monitor tilt angle
WIDE	28	Selects display mode: WIDE, NORMAL, or FULL	Selects display mode: WIDE, NORMAL, or FULL	Selects display mode: WIDE, NORMAL, or FULL	Selects display mode: WIDE, NORMAL, or FULL	Selects display mode: WIDE, NORMAL, or FULL
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 (Numeric Keypad)	29	Directly accesses chapter		Directly accesses track	1-6 selects preset for current band	Directly accesses track
DVD SETUP	30	Access DVD Setup menu	Access DVD Setup menu	Access DVD Setup menu	Access DVD Setup menu	Access DVD Setup menu
SYS SETUP	31	Access System Setup menu	Access System Setup menu	Access System Setup menu	Access System Setup menu	Access System Setup menu
SEL	32					
RDM	33	Plays all chapters in random order		Plays all tracks/discs in random order		Plays all tracks in random order
SCN	34	Plays the first ten seconds of each chapter				Plays the first ten seconds of each track
EJECT	35	Ejects disc	Ejects disc	Ejects disc	Ejects disc	Ejects disc

REAR ZONE REMOTE CONTROL

Table 2: Rear Zone Remote Control Functions

Button		Function	
Name	Ref #	DVD	VCD
MENU	1	Enters the main menu of the disc	Turns on PBC when playing VCD
TITLE	2	Enters the title menu of the disc	Plays first ten seconds of each chapter/title
MUTE	3	Toggles on/off audio output	Toggles on/off audio output
AUDIO	5	Switches the audio language for disc playback	
REPT	7	Setup to repeat playback of each chapter/title/disc	Setup to repeat playback of each chapter/title/disc
R.SRC	8	Selects playing mode for rear zone	Selects playing mode for rear zone
SUBTITLE	9	Language selection for subtitle	
▶▶	14	Fast forwards the disc content	Fast forwards the disc content
◀◀	17	Selects the previous track/chapter for playback	Selects the previous track/chapter for playback
▶/	18	Pauses playback/Starts playback	Pauses playback/Starts playback
▶▶	19	Selects the next track/chapter for playback	Selects the next track/chapter for playback
GOTO	21	Goes to specific time frame and playback	Goes to specific time frame and playback
▶	22	Slow playback/slow rewind playback	Slow playback/slow rewind playback
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0 (Numeric Keypad)	29	Directly accesses chapter	



NOTE: Your remote control may differ slightly from the one pictured here. The above diagram is for illustrative purposes only.

USING THE TFT MONITOR

Open/Close TFT Monitor

Open TFT Monitor

Press the **OPEN** button (1) on the front panel or press the (▲) button (25) of the front zone remote control to activate the mechanism that moves the display panel into the viewing position.

Close TFT Monitor

Press the **OPEN** button (1) on the front panel or press the (▲) button (25) of the front zone remote control to load the display panel back into the compartment.

TFT Monitor Auto Open

If "TFT Auto Open" is "on" when the unit is turned on, the monitor automatically moves to the viewing position.

If "TFT Auto Open" is "off" when the unit is turned on, press the **OPEN** button (1) or (▲) button (25) on the front zone remote control to move the monitor into the viewing position.

Reverse Driving Use

If the rear-view video camera is connected, the unit is on, and the monitor is stationed inside the main compartment of the unit, the monitor automatically moves into the viewing position and switches to CAMERA mode upon reverse driving. When the reverse driving stops, the monitor returns to the main storage compartment.

If the monitor is in display mode, the monitor automatically switches to CAMERA mode upon reverse driving. When the reverse driving stops, the monitor return to its original input mode.

Monitor Tilt Angle Adjustment

A known characteristic of LCD panels is the quality of the display in relationship to the viewing angle. The monitor angle can be adjusted for optimum viewing using one of the following methods:

Step by Step Angle Adjustment

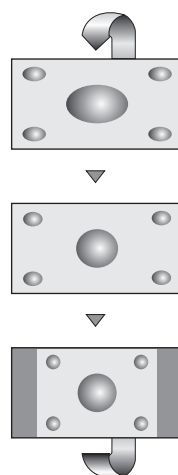
Press the (▲) or (▼) button (3, 4) on the monitor frame to adjust the tilt angle of the screen one step at a time.

Continuous Angle Adjustment

Press and hold the (▲) or (▼) button (3, 4) on the monitor frame to adjust the tilt angle in a continuous motion.

Aspect Ratio

Press the **WIDE** button (28) on the remote control or **WIDE/ PICTURE** button (2) on the monitor to adjust the aspect ratio as follows:



FULL

The entire screen is extended horizontally to the aspect ratio of 16 to 9. The extension ratio is the same at any point.

WIDE

The screen is extended horizontally to the aspect ratio of 16 to 9. The extension ratio increases toward the right and left ends of the screen.

NORMAL

The conventional display image has a 4 to 3 ratio of horizontal to vertical, leaving a blank area on the right and left sides of the display.

Image Setting

Video Output Format

Table 3 shows the video output format for each playing source.

Table 3: Video Output Formats

Playing Source	Video Output Format
TUNER	RGB Mode
DVD	RGB Mode
AUX IN	CVBS Mode
CAMERA	CVBS Mode

*CVBS – Composite Video Baseband Signal

Adjustable Parameters

While in DVD or TUNER mode, the only parameter that can be adjusted is brightness (BRIGHT). To access "PICTURE", "COLOR", "CONTRAST", and "TINT" you must be in AUX or CAMERA mode.

NOTE: The default adjustment is "0" in PAL mode. Tint is unavailable for adjustment.

Parameter Adjustment Procedure

1. **Enter Picture Quality Setting mode:**
Press the **PIC** button (24) on the remote or *press and*

hold the **WIDE/PICTURE** button (2) on the monitor panel.

2. **Select Item to Set:**
Press the (▶▶) (◀◀) buttons (14, 22) on the remote or *press and hold* the (▲) or (▼) buttons (18, 19) on the monitor panel.
3. **Set Parameters:**
Press (◀◀) (▶▶) buttons (17, 19) on the remote or press (◀) (▶) buttons (16, 17) on the monitor panel.
4. **Exit Picture Quality Setting Mode:**
Press the **PIC** button (24) on the remote or *press and hold* the **WIDE/PICTURE** button (2) on the monitor panel.

Parking Brake Inhibit

- When the "PRK SW" cable is connected to the brake switch, the display on the TFT monitor will display video only when the vehicle is parked.
- Parking cable function is overridden when the video source is set to CAMERA.
- When the parking brake inhibit is on, the front monitor displays "Parking Is On", preventing the driver from watching content while driving. Rear video screens are not affected.

Monitor Movement Mechanism

If an obstruction occurs in the monitor path, the following protective measurements can be executed to prevent damage to the mechanism or monitor:

Table 4: Monitor Protective Measures

Obstruction	Self Protection	OPEN Button Pressed	Power Reconnected
Monitor loading out horizontally	Monitor is automatically loaded into unit	Monitor fully extended horizontally	Monitor is automatically loaded into unit
Monitor loading in horizontally	Unit stops at obstruction point	Monitor fully extended horizontally	Monitor is automatically loaded into unit
Monitor loading out vertically	Unit stops at obstruction point	Monitor swivels back to the unit	Monitor swivels back to the unit
Monitor loading in vertically	Unit stops at obstruction point	Monitor swivels back to the unit	Monitor swivels back to the unit

After the protective procedure is executed, normal operation is resumed by pressing the **OPEN** button (2) or disconnecting and reconnecting the power.

OPERATING INSTRUCTIONS

Power On / Off

Press the **⏻/MUTE** button (1) to turn the unit on. The buttons on the front of the unit light up and "WELCOME" appears briefly in the LCD panel (17), followed by the current mode status. If the TFT screen is open, only the current mode status is displayed. You can also turn on the unit by pressing the **OPEN** button (2) and opening the TFT screen.

Press and hold the **⏻/MUTE** button (1) on the front panel or the **POWER** button (#) on the remote to power off the unit. The monitor is drawn back into the main compartment and the LCD screen displays "BYE-BYE".

Audible Beep Confirmation

An audible beep tone confirms each function selection. The beep tone cannot be disabled.

Mute

Press the **⏻/MUTE** button (1) on the front panel or the **MUTE** button (3) on the remote to mute the volume from the unit. Press the **MUTE** button again to restore the volume. "MUTE" is displayed on the LCD monitor. Adjusting the volume or using any of the audio set-up features cancels the mute function.

Playing Source Selection

Press the **SRC/P.MODE** button (15) on the front panel or the **SRC** button (8) on the remote to change between available playing sources in the following order: TUNER, DVD, CD Changer, AUX IN or CAMERA (rear view video camera). The playing mode is displayed on the TFT and LCD screens.

AUX IN Mode

An external peripheral device can be connected to this unit via RCA output and "AUX-IN".

CAMERA Mode

"CAMERA" mode is only available if the camera is connected and during reverse driving. To install a rear view video camera, connect the video input cable to the camera output cable.

Volume Adjustment

To increase or decrease the volume level, turn the **ROTARY ENCODER** (6) on the front panel or press the **VOL+/VOL-** buttons (15, 16) on remote control. When the volume level reaches "0" or "40", a beep sounds, indicating that the adjustment limit has been reached. The volume ranges from "0" to "40". The LCD or TFT screen displays the volume level for 3 seconds.

Audio Control Menu

The Audio Control feature allows you to easily adjust your audio system to meet the acoustical characteristics of your vehicle, which vary depending on the type of vehicle and its measurements. To get the best possible sound quality from your new system, be sure to adjust the settings for the speakers as well. Proper setting of the Fader and Balance boosts the effects of the cabin equalizer.

Accessing the Audio Control Menu

Press the **VOL/LOC/DX** knob (6) on the front panel once to display the "AUDIO" menu.

Selecting an Audio Feature for Adjustment

Continuously press the **VOL/LOC/DX** knob (6) on the front panel, or press the **(▶▶)/(◀◀)** buttons (14, 22) on the remote control or the **(▲)/(▼)** buttons (18, 19) on the joystick to select the audio feature to be adjusted.

Adjusting an Audio Feature

Rotate the **VOL/LOC/DX** knob (6), press the **(◀◀)/(▶▶)** buttons (17, 19) on the remote control, or press the **(◀)/(▶)** buttons (16, 17) on the joystick to adjust the selected feature to the desired setting.

Table 5: Audio Adjustments

Audio Function	Adjustable Range
EQ	User
	Flat
	Jazz
	Pop
	Classical
Treble	-7 to +7
FADE	-7 to +7
BAL	-9 to +9
SUB.W	-9 to +9
Loud	Off, 1-4

NOTE: The Bass and Treble levels are only adjustable when EQ is set to "User" mode.

The Loud function compensates for deficiencies in sound ranges at low levels. Loudness levels range from 1-4 or "off". When the Loud function is on, LOUD is displayed on the screen.

Exiting the Audio Control Menu

Press and hold the **VOL/LOC/DX** knob (6) or stop making adjustments for a few seconds to exit the audio control menu.

Six-Channel Audio Control

NOTE: Before adjusting the volume of any speaker, please refer to "Surround Setup" on page 19.

Table 6: 6-Channel Audio Adjustments

Item	Adjustable Range
Master Volume	00 to 40
Front Left Channel Volume	-10 to +10
Front Right Channel Volume	-10 to +10
Rear Left Channel Volume	-10 to +10
Rear Right Channel Volume	-10 to +10
Center Channel Volume	-10 to +10
Subwoofer Volume	-10 to +10

Rear Zone

If a monitor is installed in the rear zone and connected to the rear zone AV output, passengers in the back seat can control the DVD output using the rear zone remote control. See "Rear Zone Remote Control" on page 9 for instructions.

System Reset

To correct a system halt or other illegal operation, use the tip



of a pen to press the **RESET** button (22) located on the front bottom-right corner of the unit. After a system reset, the unit restores all factory default settings.

NOTE: If the unit is reset while a DVD is playing, the DVD resumes play once the reset is complete.

Line Mute

If the "MUTE" wire is connected, audio output mutes when a telephone call is received by the car phone or when verbal navigation is performed.

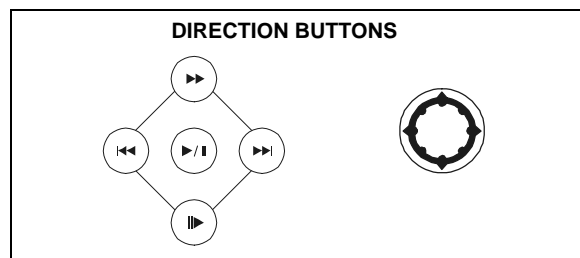
SYSTEM SETUP MENU

In "System Setup" mode, "ASP CONFIG" and "GENERAL SETUP" are available for adjustment. Setup can be performed by pressing the dedicated button on the remote control or on the front panel. For system settings, press the **SYS SETUP** button (31) on the remote control to enter the "System Setup" menu. "ASP CONFIG" is highlighted in green.

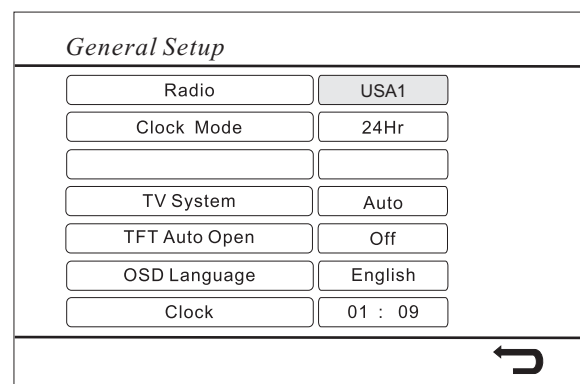
General Setup Menu

Accessing the General Setup Menu

To access the "GENERAL SETUP" Menu, press the direction buttons on the joystick (16, 17, 18, 19) or remote control (14, 17, 18, 19, 22) to highlight "GENERAL SETUP" in green.



Press the **▶/■** button (18) on the remote control to enter the "GENERAL SETUP" menu. A menu appears with the option for the first item, "Radio", highlighted in light blue.



Selecting a Feature for Adjustment

Press the **▶▶** or **▶■** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick to select the feature to be adjusted.

Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the **▶/■** button (18) on the remote or by pressing the **ENTER** (joystick) button (20) on the unit. A submenu appears in a second row with the selected option highlighted in light blue.
2. Select a new value by pressing the **▶▶** or **▶■** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick.
3. Confirm your selection by pressing the **▶■**, **◀◀**, or **▶▶** buttons (14, 17, 19) on the remote control, or the **◀** or **▶** button (16, 17) on the joystick. The new value is highlighted in light blue and setup is complete.

Table 7: General Setup Menu Features

Setting	Options	Function
Radio	USA1	Select the appropriate setting based on the country in which you reside.
	USA2	
	Arabia	
	China	
	S-America	
	Europe	
Clock Mode	12H	Clock displays 12 hour time using AM and PM.
	24H	Clock displays 24 hour time up to 23:59.
TV System	Auto	The color signal output is switched automatically based on the current disc.
	NTSC	The color signals are output in the standard NTSC format.
	PAL	The color signals are output in the standard PAL format.
TFT Auto Open	On	The TFT panel automatically opens when the unit is turned on.
	Off	You must press the OPEN button (1) to open the TFT panel.
OSD Language	English	The menus are displayed in English only.
Clock	(HH:MM)	See "Adjusting the clock" to learn how to set the clock.
		Return to previous menu

Adjusting the Clock

Method 1 – TFT screen open:

1. Access the "Clock" setting under the General Setup menu.
2. Press the **▶▶** or **▶■** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick to move the cursor to the "Hour" or "Min" position.
3. Press the **◀◀**, or **▶▶** buttons (17, 19) on the remote control or the **◀** or **▶** buttons (16, 17) on the joystick to adjust the hour or minutes.
4. Press the **▶■** button (14) on the remote control to confirm setup.

Method 2 – TFT screen closed:

1. Press and hold the **DISP** button (5) until the clock flashes in the LCD display.
1. Press the **▲** or **▼** buttons (18, 19) on the joystick to move the cursor to the "Hour" or "Min" position.
2. Press the **◀** or **▶** buttons (16, 17) on the joystick to adjust the hour or minutes.
3. Press the **DISP** button (5) on the unit to confirm setup.

Returning to the System Setup Menu


To return to the System Setup menu, move to , then press the **▶/■** button on the remote control.

ASP (Audio Sound Processing) Config Menu

The ASP Config Menu allows you to make fine audio adjustments.

Accessing the ASP Config Menu

To access the "ASP CONFIG" Menu, press the direction buttons on the joystick (16, 17, 18, 19) or remote control (14, 17, 18, 19, 22) to highlight "ASP CONFIG" in green. Press the **▶/■** button (18) on the remote control to enter the "ASP CONFIG" menu. A menu appears with the option for the first item, "Bass Center Freq", highlighted in light blue.

ASP Config	
Bass Center Freq	200HZ
Treble Center Freq	17KHZ
SUB.W Filter	120KHZ
SUB.W Phase	0D
Bass Q-Factor	1.25
	


Adjusting a Feature

1. Enter the option field for the feature you want to adjust by pressing the ►/|| button (18) on the remote or by pressing the **ENTER** (joystick) button (20) on the unit. A submenu appears in a second row with the selected option highlighted in light blue.
2. Select a new value by pressing the ►► or ► buttons (14, 22) on the remote control or the ▲ or ▼ buttons (18, 19) on the joystick.
3. Confirm your selection by pressing the ►►, ◀◀, or ►◀ buttons (14, 17, 19) on the remote control, or the ◀ or ► button (16, 17) on the joystick. The new value is highlighted in light blue and setup is complete.

Table 8: ASP Config Menu Features

Setting	Options	Function
Bass Center Freq	60Hz	According to the audio source, select the Bass Center Frequency to achieve the best Bass effect.
	80Hz	
	100Hz	
	130Hz	
	150Hz	
	200Hz	
Treble Center Freq	10KHz	According to the audio source, select the Treble Center Frequency to achieve the best Treble effect.
	12.5KHz	
	15KHz	
	17KHz	

Table 8: ASP Config Menu Features

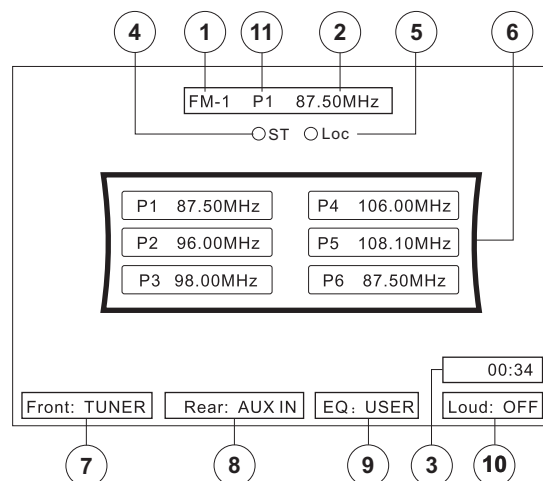
Setting	Options	Function
Sub.W Filter	80Hz	Selecting a crossover frequency sets a cut-off frequency of the subwoofer's LPF (low-pass filter) and the "SMALL" speakers' HPF (high-pass filter). The Crossover frequency setting has no effect if the subwoofer is set to "OFF" and any other speaker is set to "LARGE".
	120Hz	
	160Hz	
Sub.W Phase	0D	Subwoofer output IN phase
	180D	Subwoofer output OUT OF phase
		<i>NOTE: Depending on your installation, reversing the subwoofer phase may increase Bass output.</i>
Bass Q-Factor	1.0	When the Bass Center Frequency is selected, adjusting the Bass Q-Factor alters the sharpness of the Bass output.
	1.25	
	1.5	
	2.0	
		Return to previous menu

Exiting the System Setup Menu

To exit setup mode and resume normal playback, press the **SYS SETUP** button (31) on the remote control or the **DSP** button (5) on the front panel.

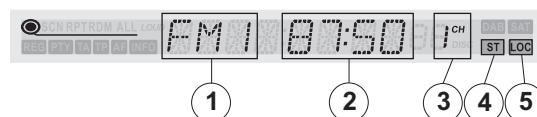
TUNER OPERATION

Tuner TFT Display



1. Current Radio Band Indicator
2. Radio Frequency Indicator
3. Clock
4. Stereo Broadcasting Indicator
5. Strong Local Signal Broadcasting Indicator
6. Preset Radio Stations
7. Front Zone Playing Mode
8. Rear Zone Playing Mode
9. User Defined Equalizer Level
10. Loud Setting Indicator
11. Current Preset Station Indicator

Tuner LCD Display



1. Current Radio Band Indicator
2. Radio Frequency Indicator
3. Current Preset Station Indicator
4. Stereo Broadcasting Indicator
5. Strong Local Signal Broadcasting Indicator

Switch to Radio Tuner source

Press the **SRC** button (15) on the front panel or remote control (8) to switch to the RADIO TUNER source. The Tuner TFT or LCD display appears.

Select FM/AM Band

Press the **BAND** button (14) on the front panel or the remote control (20) to change between the following bands: FM1, FM2, FM3, AM1, and AM2.

Auto Tuning

Press and hold the **▶▶** button (19) on remote control or the **▶** button on the joystick (17) to seek the next available radio station by increasing the tuning frequency. Press the button again to stop searching.

Press and hold the **◀◀** button (17) on the remote control or the **◀** button on the joystick (16) to seek the next available radio station by decreasing the tuning frequency. Press the button again to stop searching.

Seek Tuning

Press the **▶▶** button (19) on remote control or the **▶** button on the joystick (17) to seek the next station higher.

Press the **◀◀** button (17) on the remote control or the **◀** button on the joystick (16) to seek the next station lower.

Manual Tuning

Press the **▶▶** or **▶** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick to increase or decrease the tuning frequency one step.

Using Preset Stations

Six numbered preset buttons store and recall stations for each band. All six stored stations (P1-P6) for the current band appear on the TFT screen.

Storing a Station

1. Select a band (if needed), then select a station.
2. Hold a preset button (8-13) for three seconds. The preset number appears in the LCD panel.

Recalling a Station

1. Select a band (if needed).
2. Press a preset button (8-13) to select the corresponding stored station.



Auto Store (AS)

Automatic Storing of Preset Stations

To select six strong stations and store them in the current band:

1. Select a band (if needed).
2. Press **AS** (26) for > 2 seconds to activate the Auto Store function.

The new stations replace stations already stored in that band.

Using Preset Scan

To scan stored stations in the current band:

1. Select a band (if needed).
2. Press **AS** (26) for < 2 seconds. The unit pauses for 10 seconds at each preset station.
3. Press **AS** again to stop scanning when the desired station is reached.

Local Radio Station Seeking (LOC)

When the Local function is on, only radio stations with a strong radio signal are played. To activate the Local function, *press and hold* the **LO/DX** button (6) on the front panel. Press **LO/DX** again to turn Local off. When the Local function is active, the "LOC" indicator appears lit on the LCD or TFT screen.

DVD PLAYER OPERATION

NOTE: When properly installed, DVD video cannot be displayed on the main TFT screen unless the parking break is applied. If you attempt to play a DVD while the vehicle is moving, the TFT screen displays "PARKING" with a blue background. Rear video screens, if applicable, will operate normally.

Opening/Closing the TFT Video Screen

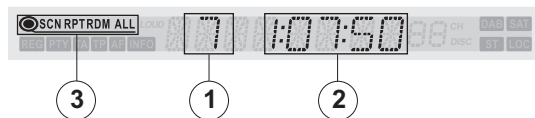
Opening the TFT Screen

To open the TFT video screen, press the **OPEN** (2) button. The unit beeps and then open.

Closing the TFT Screen

Press the **OPEN** (2) button again to close the TFT screen. If the screen is in the "IN" position, it moves out before closing. Once the TFT screen is closed, the LCD panel displays the current status.

DVD LCD Display



1. Current Playing Chapter
2. Current Playback Time
3. SC - Scan Playback; RPT - Repeat Playback; RDM - Random Playback; ALL - Playback All Discs

Insert/Eject Disc

Upon inserting a DVD disc, DVD mode is entered disc play begins. If the TFT screen is closed, the DVD indicator appears lit on the LCD screen.

NOTE: If Parental Lock (Rating) is activated and the disc inserted is not authorized, the 4-digit code must be entered and/or the disc must be authorized (see "RATING (Parental Lock) Menu" on page 19).

You cannot insert a disc if there is already a disc in the unit or if the power is off.

NOTE: DVD-R and DVD-RW will not play unless the recording session is closed and the DVD is finalized.

Ejecting a Disc

Press the **▲** button (21) on the front panel or remote control (25) to eject the disc. The unit automatically reverts to Tuner

mode. You may eject a disc with the power off and the unit remains off after the disc is ejected.

Reset the Loading Mechanism

If the disc loads abnormally or an abnormal core mechanism operation occurs, press and hold the **▲** button (21) on the front panel or remote control (25) to reset the loading mechanism. Normal operation resumes.

Controlling Playback

Stopping Playback

Press the **STOP** button (13) on the front panel or the **■/BAND** button (20) on the remote control to stop DVD play.

Pausing Playback

Press the **SRC** button (15) on the front panel or the **▶/||** button on the remote control (18) to suspend or resume disc play.

Slow Motion Playback

Press the **▶** button (22) on the remote control or the **▼** button (19) on the joystick to play the current title in slow motion at 1/2, 1/4, 1/6 or 1/7, the normal speed. Press **▶/||** (18) to resume normal play. Continue pressing the **▶** or **▼** button to slow reverse.

Repeat Playback

Press the **4/REP** button (11) on front panel or the **REPT** button (7) on remote control to alter repeat mode according to the following:

- DVD: Repeat Title, Repeat Chapter, Repeat Off
- VCD (PBC Off): Repeat Single, Repeat Off

NOTE: For VCD play, the repeat function is not available if PBC is on.

Sectional Repeat Function (A-B)

Use the A-B function to define a specific area of a disc to repeat.

- Press the **REPT A-B** button (6) on the remote control to set the start point (A) of the repeated section.
- Press the **REPT A-B** button again once you reach the desired end point (B) of the repeated section. The selected portion of the DVD will now repeat continuously.
- Press the **REPT A-B** button again to cancel the A-B section setting and stop repeat play.

Random Playback

With a DVD, VCD, or CD playing, press the **5/RDM** button (12) on the front panel or the **RDM** button (33) on the remote

control to activate random playback and play all chapters/tracks in random order. "Shuffle On" appears on the screen.

Press the **▶▶** button (19) on the remote control or the **▶** button on the joystick (17) to play the next random track.

Press the **RDM** button again to turn random play off. "Shuffle Off" appears on the screen.

NOTE: When a VCD is playing with PBC turned "On", activating random playback automatically turns PBC off.

Accessing the DVD Menu

Press the **MENU** button (1) on the remote control to recall the main DVD menu. Use the directional (arrow) buttons (**◀**, **▶**, **▲** & **▼**) on the joystick (16, 17, 18, 19) to select a title from the menu.

Press the **TITLE** button (2) on the remote control to select a different title for playback.

Press the **▶/||** button (18) on the remote control or the **ENTER** (joystick) button (20) to confirm your selection and begin playback.

Moving Through Chapters

Press the **▶▶** button (19) on the remote control or the **▶** button on the joystick (17) to advance to the next chapter on the DVD.

Press the **◀◀** button (17) on the remote control or the **◀** button on the joystick (16) to move to the previous chapter.

Fast Forward/Fast Reverse

Press the **▶▶** button (14) on the remote control or the **▲** button (18) on the joystick to fast forward. Keep pressing and releasing the button to increase the rate from "2X" to "4X", "8X", and "20X". Continue pressing the **▶▶** or **▲** button to fast reverse.

Scanning

Press the **AS** button (26) to play the first ten seconds of each chapter. Press **AS** again to stop the scan function and play the current chapter.

Alternating Between 2-Channel and 6-Channel Mode

Press and hold the **5/2-6CH** button (12) on the front panel to switch between 2-channel (DownMix Mode) and 6-channel (Full 6CH Mode) speaker output. 2-Channel audio is for CD and MP3 playback, while 6-Channel audio is for DVD

playback. Depending upon the channel selected and your speaker setup, the audio output varies according to the following table.

Table 9: Speaker Output Options

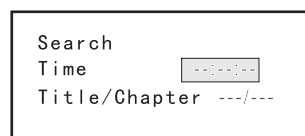
Speaker Setup	Front Spkr	Rear Spkr	Center Spkr	Sub-Woofer
2CH mode	X	X		
Play 2CH audio in 6CH mode with Surround "Off"	X			
Play 2CH audio in 6CH mode with Surround "On"	X	X	X	X
Play 6CH audio in 6CH mode	X	X	X	X

NOTE: The information in the above table is valid only when the setup values for "Front Speaker", "Center Speaker", and "Surround Speaker" are set to "low".

Goto Search

During DVD or VCD playback, perform the following steps to use the GOTO feature to access a specific location on a disc:

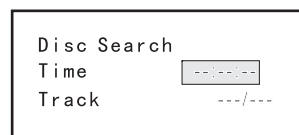
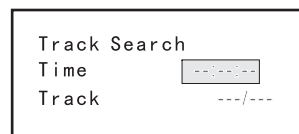
1. Press the GOTO button (21) on remote control to enter "GO TO" mode.
2. Press the ►► or ►► buttons (14, 22) on the remote control or the ▲ or ▼ buttons (18, 19) on the joystick to select a category (highlighted in blue).
 - For DVD mode, you can choose Time or Title/Chapter search.



DVD Search

Time – Go to specific time in current title
Title/Chapter – Go to specific time in a chapter

- For VCD mode, press the **GOTO** button to choose between Track Search, Disc Search and Exit.



VCD Track Search

Time – Go to specific time in the current track
Track – Go to specific track

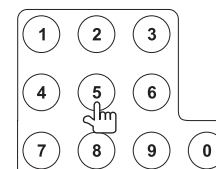
VCD Disc Search

Time – Go to specific time on disc
Track – Go to specific track

3. Enter a time into the field using the numeric keypad (29) on the remote control.
4. Press the ►/|| button (18) on the remote control or the **ENTER** (joystick) button (20) to go to the specified location on the disc.
5. Press the **GOTO** button again to exit.

Direct Chapter / Track Selection

During DVD, VCD and CD playback, you can use the numeric keypad on the remote control (29) to access a track directly.



Viewing an Alternate Picture Angle (DVD Only)

Some DVDs contain scenes that have been shot simultaneously from different angles. For discs recorded with multiple angles, press the **ANGLE** button (13) on the remote control to toggle available angles of the on-screen image.

Zooming

Press the **ZOOM** button (23) on the remote control to enlarge and pan through the video image using the following options: "Q1", "Q2", "Q3", and "OFF".

Multi-Language Discs (DVD Only)

Changing Audio Language

If you are watching a disc recorded in multiple languages, press the **AUDIO** button (5) on the remote control to choose a language.

Changing Subtitle Language

If you are watching a disc recorded in multiple languages with subtitles, press the **SUBTITLE** button (9) on the remote

control to choose the language in which you would like the subtitles to appear.

NOTE: During VCD playback, press the AUDIO button (5) on the remote control to choose between Left Channel, Right Channel, and Stereo.

PBC (Play back Control) (VCD Only)

For VCDs with play back functionality, play back control (PBC) provides additional controls for VCD playback.

Press the **MENU** button (1) on remote control to toggle the PBC function "On"/"Off". Once PBC is on, playback starts from track one of the play list.

NOTE: When PBC is activated, fast forward, slow playback, and previous/next track are available. Repeat and direct track selection are not available.

When PBC is activated, selecting random, scan, or search playback automatically deactivates PBC.

Playback Information

During DVD and VCD playback, press the **DISP** button (10) on remote control to display playback information on the screen including the media playing and current playback time.

DVD Playback Information

The following information is displayed at the *top* of the screen during DVD playback:

DVD T : 5/8 C : 2/16 00:41:28 2/6 Eng

- T : 5/8 – "5 / 8" indicates the fifth of 8 titles on the DVD is currently playing.
- C : 2/16 – "2 / 16" indicates the second of 16 titles on the DVD is currently playing.
- 00:41:28 – "00:41:28" indicates the playback time of the current title.
- 2 / 6 Eng – The language display information indicates the second language out of 6 (English) is currently being used.

The following information appears at the *bottom* of the screen during DVD playback:

Front: DVD Rear: AUX IN SURR1 DSP

- Front: DVD – "DVD" is the current playing source for the front zone.

- Rear: AUX IN – “AUX IN” is the current playing source for the rear zone.
“Surround” is the current playback audio encoding system.
“DSP” indicates Digital Signal Processing.

VCD Playback Information

The following information is displayed at the *top* of the screen during VCD playback:

VCD2.0 T: 6/18 00:02:18

- VCD2.0 – Format of current disc.
- T: 6/18 – “6/18” indicates the sixth of 18 tracks on the VCD is currently playing.
- 00:02:18 – “00:02:18” indicates the playback time of the current track.

The following information appears at the *bottom* of the screen during VCD playback in 6-Channel mode:

Front: DVD Rear: AUX IN MPEG DSP

- Front: DVD – “DVD” is the current playing source for the front zone.
- Rear: AUX IN – “AUX IN” is the current playing source for the rear zone.
“MPEG” is the decoding method in use.
“DSP” indicates Digital Signal Processing.

The following information appears at the *bottom* of the screen during VCD playback in 2-Channel mode:

FRONT: DVD REAR: AUX IN EQ: FLAT LOUD: Level 1

- Front: DVD – “DVD” is the current playing source for the front zone.
- Rear: AUX IN – “AUX IN” is the current playing source for the rear zone.
- EQ: FLAT – The equalizer setting is FLAT.
- Loud: Level 1 – The Loud option is set to Level 1 loudness.

General Disc Information

Table 10: Disc Properties







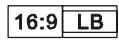

Symbol	12cm Disc Properties	Max Play Time
	Single side single layer (DVD-5) Single side double layer (DVD-9) Double side single layer (DVD-10) Double side double layer (DVD-18)	(MPEG 2 Method) 133 minutes 242 minutes 266 minutes 484 minutes
	Single side single layer (VCD)	(MPEG 1 Method) 74 minutes
	Single side single layer	74 minutes

Table 11: Disc Symbols

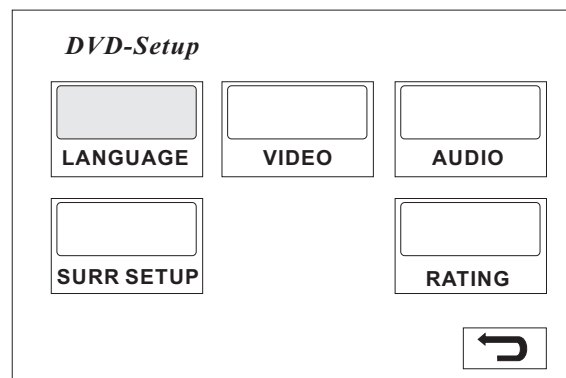
Symbol	Meaning
	Number of voice languages recorded. The number inside the icon indicates the number languages on the disc (maximum of 8).
	Number of subtitle languages available on the disc (maximum of 32).
	Number of angles provided (maximum of 9).
	Aspect ratios available. “LB” stands for Letter Box and “PS” stands for Pan/Scan. In the example on the left, the 16:9 video can be converted to Letter Box video.
	Indicates the region code where the disc can be played. <ul style="list-style-type: none"> Region 1: USA, Canada, East Pacific Ocean Islands Region 2: Japan, Western Europe, Northern Europe, Egypt, South Africa, Middle East Region 3: Taiwan, Hong Kong, South Korea, Thailand, Indonesia, South-East Asia Region 4: Australia, New Zealand, Middle and South America, South Pacific Ocean Islands/Oceania Region 5: Russia, Mongolia, India, Middle Asia, Eastern Europe, North Korea, North Africa, North-West Asia Region 6: Mainland China ALL: All regions

DVD SETUP MENU

In "DVD Setup" mode, "LANGUAGE", "VIDEO", "AUDIO", "SURR SETUP", and "RATING" (parental lock) are available for setup. This operation can be performed using the remote control or joystick controls.

Accessing the DVD Setup Screen

For system settings, press the **DVD SETUP** button (31) on the remote control to enter the "DVD Setup" menu. "LANGUAGE" is highlighted in green.



NOTE: Once the DVD setup is complete, the settings are memorized. To return to the factory default settings, press the **RESET** button (22) on the front panel.

Accessing a Menu

To access a menu (LANGUAGE, VIDEO, AUDIO, SURR SET-UP, or RATING), press the direction buttons on the joystick (16, 17, 18, 19) or remote control (14, 17, 18, 19, 22) to highlight the desired menu in green.

Selecting a Feature for Adjustment

Once inside a menu, press the **▶▶** or **▶▶** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick to select the feature to be adjusted.

Adjusting a Feature

- Enter the option field for the feature you want to adjust by pressing the **▶/||** button (18) on the remote or by pressing the **ENTER** (joystick) button (20) on the unit. A submenu appears in a second row with the selected option highlighted in light blue.
- Select a new value by pressing the **▶▶** or **▶▶** buttons (14, 22) on the remote control or the **▲** or **▼** buttons (18, 19) on the joystick.

- Confirm your selection by pressing the **▶▶**, **◀◀**, or **▶▶** buttons (14, 17, 19) on the remote control, or the **◀** or **▶** button (16, 17) on the joystick. The new value is highlighted in light blue and setup is complete.

LANGUAGE Menu

If a DVD supports more than 1 Subtitle or Audio language, all the languages are available for selection during playback. If the selected language is not supported by the DVD, then the default language is used. During playback, press the **SUBTITLE** (9) or **AUDIO** (5) button on the remote control to change the language directly. This will not effect the DVD menu settings.

Table 12: LANGUAGE Menu Features

Setting	Options	Function
Subtitle	English	Select the default language in which you would like subtitles (if applicable) to be displayed
	Chinese	
	Auto	
	Off	
Audio	English	Select the default language in which you would like audio (when optional) to be played
	Chinese	
DVD Menu	English	Select the default language in which you would like the DVD menu (if applicable) to be displayed
	Chinese	
		Return to previous menu

VIDEO Menu

Table 13: VIDEO Menu Features

Setting	Options	Function
TV Shape (Aspect Ratio)	4:3 PS	With 16:9 display, the left and right sides are cut off
	4:3 LB	With 16:9 display, the top and bottom are cut off
	16:9	Image is presented in wide view with a 16:9 aspect ratio
Angle Mark	On	Angle indicator (if applicable) is shown
	Off	Angle indicator is not shown
		Return to previous menu

NOTE: For standard discs not formatted for "widescreen", use of the 16:9 aspect ratio will result in image distortion.

AUDIO Menu

The VM9410 has a built-in Pink Noise generator to help set the relative speaker levels for multi-channel audio playback.

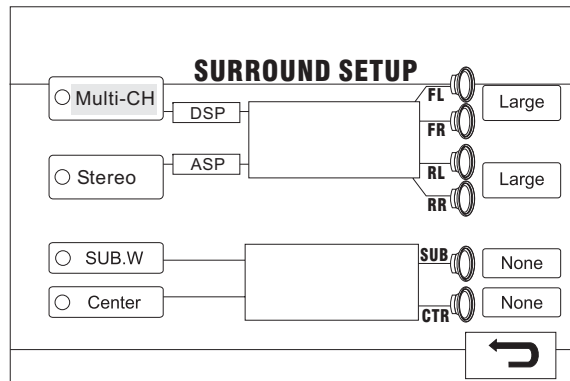
Table 14: AUDIO Menu Features

Setting	Options	Function
Pink Noise	Off	Stop output of pink noise
	Left	Left channel pink noise
	Center	Center channel pink noise
	Right	Right channel pink noise
	Left Surr	Left surround channel pink noise
	Right Surr	Right surround channel pink noise
	Subwoofer	Subwoofer pink noise
DRC	Off	Employ the Dynamic Range Control for better playback for low volumes.
	On	
Surround Mode	Off	
	Surround I	Use to decode surround effects from analog or digital 2-channel down-mixed sources.
	Surround II	Use to decode surround effects from digital bit-stream movies.
	SURR Matrix	Apply matrixed effects to mono sources.
	SURR Movie	Apply enhanced movie surround effects.
	SURR Music	Apply surround music effects.
CNTR CTRL	5ms	Adjust the time difference between the center and front speakers to create a time delay between 1 and 5 milliseconds, producing a more accurate audio effect.
	4ms	
	3ms	
	2ms	
	1ms	
	0ms	

Table 14: AUDIO Menu Features

Setting	Options	Function
REAR CTRL	15ms	Adjust the time difference between the rear and front speakers to create a time delay between 3 and 15 milliseconds, producing a more accurate audio effect.
	12ms	
	9ms	
	6ms	
	3ms	
	0ms	
		Return to previous menu

SURROUND SETUP Menu



To change speaker settings for 2-channel mode, use the ►► or ► buttons (14, 22) on the remote control or the ▲ or ▼ buttons (18, 19) on the joystick to select "Stereo". To change speaker settings for 6-channel mode, select "Multi-CH". After selecting 2 or 6-channel mode, use the ►► button (19) on remote control or the ► button on the joystick (17) to move to the speaker settings on the right. Refer to Table 15 when selecting speaker options for each mode.

Table 15: SURROUND SETUP Menu Features

Setting	Options	Function
FL (Front Left) / FR (Front Right)	Large	Use when front speakers have good bass output
	Small	Use when speakers do not have good bass output

Table 15: SURROUND SETUP Menu Features

Setting	Options	Function
LR (Left Rear) / RR (Right Rear)	Large	Use when rear speakers have good bass output
	Small	Use when rear speakers do not have good bass output
	None	Use when rear speakers are not present
SUB (Subwoofer)	Present	Use when subwoofer is present
	None	Use when subwoofer is not present
CTR (Center)	Large	Use when center speaker has good bass output
	Small	Use when center speaker does not have good bass output
	None	Use when center speaker is not present
		Return to previous menu

RATING (Parental Lock) Menu

The DVD system has a built-in parental lock feature to prevent unauthorized persons from viewing restricted disc content. By default, the rating system is unlocked. Once setup, the parental lock is released only by entering the correct password. Once the password is entered, rating is available for setup.

Table 16: RATING Menu Features

Setting	Options	Function
Password	----	Enter a 4-digit password to activate the "Rating" feature
Rating	1. Kid Safe	Select the appropriate rating level for the intended audience You may override higher ratings by using your password
	2. G	
	3. PG	
	4. PG-13	
	5. PG-R	
	6. R	
	7. NC-17	
	8. Adult	
Load Factory	Reset	Select "Reset" to restore the factory default settings for the <i>Rating system only</i>
		Return to previous menu

To reset the password, enter the "RATING" menu and enter the current password. Once the correct password is entered, you can access the "Password" field and enter a new one.

NOTE: Record the password and keep it in a safe place for future reference. The rating for each disc is marked on the disc, disc packing, or documentation. If the rating is not available on the disc, the parental lock feature is unavailable. Some discs restrict only portions of the disc and the appropriate content will play. For details, please refer to the disc description.

CD PLAYER/CHANGER OPERATION

Instructions for Insert/Eject, Play/Pause, Stopping Playback, Track Selection, Fast Forward/Fast Reverse, Scan, and Random Play are the same for DVD, CD, CD Changer and MP3 operation. Please see the DVD Player Operation section for information about these topics.

NOTE: Upon inserting a disc with the TFT screen open, the disc and track title (if available), along with the track number and playing time appear on the screen.

NOTE: CD-R and CD-RW will not play unless the recording session is closed.

MP3/WMA Operation

This player allows you to playback MP3 files recorded on CD-ROM, CD-R, and CD-RW. For CD-RW discs, please make sure it is formatted using the full method and not the quick method to prevent illegal disc operation.

MP3 Format Compatibility

The file naming formats listed below are compatible with this unit:

- ISO 9660 – file name: 12 characters, file extension: 3 characters
- ISO 9660 – file name: 31 characters, file extension: 3 characters
- Joliet – 64 characters

If the file or folder name does not conform to ISO 9660 file system standards, it may not be displayed or played back correctly.

Use the following settings when compressing audio data for your MP3 disc:

- Transfer Bit Rate: 320kbps
- Sampling Frequency: 48kHz

When recording MP3 up to the maximum disc capacity, disable additional writing. For recording on an empty disc up to maximum disc capacity, use the "Disc at once" setting.

Playing MP3/WMA Files

After inserting a MP3/WMA disc, files will play in the sequence of the "Root" directory.

Use the numeric keypad (29) on the remote control to access files directly.

Selecting a Playback Mode

1. Press the **STOP** button (13) on the front panel or the **■/BAND** button (20) on the remote control to stop disc play.
2. Press the **▶▶** button (19) on the remote control or the **▶** button on the joystick (17) to enter playback mode (PLAY MOD).
3. Press the **▶||**, **◀◀**, or **▶▶** buttons (18, 17, 19) on the remote control, or the **◀** or **▶** button (16, 17) on the joystick to choose from the following playback options:

Table 17: MP3/WMA Playback Modes

Play Mode	Playback Details
Disc Normal	Playback all files on the disc and stop at the end
Disc Repeat	Repeat playback of all files on the disc
Shuffle	Randomly play all files and stop at the end
Single Track	Play a specific file and stop
Repeat Track	Repeat playback of a specific file
Folder Normal	Play all files in a folder and stop at the end
Folder Repeat	Repeat playback of all files in a folder/directory

4. Press the **▶▶** button (14) on the remote control to confirm the playback mode then press the **▶||** button (18) to begin playback.

CD Changer Operation

This unit is capable of operating a SANYO CD changer. Please use the remote control supplied with your changer when the changer is in use.

NOTE: The Scan, Random, and Repeat features are not available in CD Changer mode.

Accessing CD Changer Mode

Once the CD changer is properly connected, press the **SRC** button (15) on the front panel or remote control (8) to switch to CD Changer mode.

Random Playback

With a CD playing, press the **5/RDM** button (12) on the front panel or the **RDM** button (33) on the remote control to

activate random playback and play all tracks in random order. "Shuffle On" appears on the screen.

Press the **5/RDM** button again to randomly play all the discs. The "RDM" and "ALL" indicators appear lit on the display.

Press the **▶▶** button (19) on the remote control or the **▶** button on the joystick (17) to play the next random track.

Press the **RDM** button again to turn random play off. "Shuffle Off" appears on the screen.

Moving Through Discs

Press the **DISC ▼** button (12) on the remote control or the **1/ DISC-** button (8) on the front panel to move to the previous disc.

Press the **DISC ▲** button (11) on the remote control or the **2/ DISC+** button (9) on the front panel to move to the next disc.

TROUBLESHOOTING

Table 18: Troubleshooting

Problem	Cause	Corrective Action
GENERAL		
Unit will not power on	Radio Fuse blown	Install new fuse with correct rating
	Car battery fuse blown	Install new fuse with correct rating
	Illegal operation	Press the RESET button located in the bottom right corner of the front panel
Remote control does not function	Battery depleted	Replace battery with new one
	Battery installed incorrectly	Remove battery and install correctly
No/low audio output	Improper audio output connection	Check wiring and correct
	Volume set too low	Increase volume level
	Improper "MUTE" connection	Review wiring diagram and check "MUTE" connection
	Speakers damaged	Replace speakers
	Heavily biased volume balance	Adjust the channel balance to the center position
	Speaker wiring is in contact with metal part of car	Insulate all speaker wiring connections
Poor sound quality or distortion	Pirated disc is in use	Use original copy
	Speaker power rating not compatible with unit	Connect proper speakers
	Speaker is shorted	Check speaker contact
Tel-Mute malfunction	"MUTE" wire is grounded	Check that "MUTE" connection is not grounded and that it's properly insulated
Unit resets itself when engine is off	Incorrect connection between ACC and positive battery wire	Check wiring and correct
TFT MONITOR		
Monitor does not open automatically	TFT Auto Open is turned off	Turn TFT Auto Open on
No image	Incorrect connection to parking brake wire	Check wiring and correct
	PRK SW is activated and parking brake is not engaged	Stop vehicle in safe place and apply parking brake
Flashing image or interference appears on screen	DVD is not compatible with current TV system settings	Change setup to accommodate disc
	Improper video signal connections	Check wiring and correct
Prolonged image or improper height/width ratio display	Improper aspect ratio setup	Use correct aspect ratio setting
Monitor stops at incorrect position	Moving path is blocked	Press OPEN key to restart monitor movement
TUNER		
Weak station searching	Auto antenna is not fully extended	Connect the auto antenna control cable properly
	Auto antenna not properly connected	Connect the auto antenna control cable properly
	LOCAL function is activated	Turn LOCAL function off
Cannot insert disc	Disc already inside unit	Eject current disc and insert new one

Table 18: Troubleshooting

Problem	Cause	Corrective Action
Disc does not play back	Disc is warped or scratched	Use disc in good condition
	Disc is dirty or wet	Clean disc with soft cloth
	Laser pickup is dirty	Clean laser pickup with cleaning disc
	Incompatible disc is used	Use compatible disc
	Disc rating exceeds Parental Lock rating limit	Change Parental Lock settings to lower restriction
	Disc region code is not compatible with unit	Use disc with proper region code
	Disc is inserted upside down	Insert disc with label side up
Image blurred, distorted, or dark	Disc is illegally copied	Use original disc
PBC cannot be used during VCD playback	PCB is not available on the disc	
No repeat or searching while playing VCD	PCB is on	Turn PCB off
MP3		
Interruption occurred during playback	Disc is dirty or scratched	Clean disc or replace
	File is damaged/bad recording	Recreate disc with good files
Incorrect playback message displayed	Message is longer than LCD can display	

Error Messages

Table 19: Error Messages

Message Displayed	Cause	Corrective Action
Loading	Disc is being read	
No Disc	Disc is dirty	Clean disc with soft cloth
	Disc is upside down	Insert disc with label side up
	Disc not present in loading compartment	Insert disc
Bad Disc	Disc is dirty	Clean disc with soft cloth
	Disc is upside down	Insert disc with label side up
Unknown disc	Disc format is not compatible with this unit	
Region Error	DVD is not compatible with region code of unit	
Error	illegal mechanism operation	Press EJECT key for 5 seconds to reset loading mechanism

Care and Maintenance

1. Use only a clean silicone cloth and neutral detergent to clean the front panel or monitor. A rough cloth and non-neutral detergent (such as alcohol) may result in scratching or discoloration.
2. Do not get water or cleaning fluids on the unit.
3. If the temperature inside the player gets too hot, a protective circuit automatically stops play of the disc. If this occurs, allow the unit to cool before operating the player again.

4. Never insert anything other than a 5" (12 cm) compact disc into the player as the mechanism can be damaged by foreign objects.
5. Do not attempt to use a 3" (8 cm) CD-Single disc in this unit, either with or without an adaptor, as damage to the player and/or disc may occur. Such damage is not covered by the Warranty on this product.
6. The CD player may not operate properly in extreme hot or cold. If such conditions occur, allow the interior of the

- vehicle to reach a normal temperature before using player.
7. When the vehicle warms up during cold weather or under damp conditions, condensation may appear on the LCD panel. Should this occur, the screen will not operate properly until the moisture has evaporated.
8. We suggest you use a cleaning disc in this unit more frequently than in the unit in your home due to the environmental conditions of the vehicle.

SPECIFICATIONS



CEA Power Ratings

Power Output: 13 watts RMS X 4 channels into 4-ohms @ \leq 1% THD+N

Signal to Noise Ratio: 70dBA below reference. (Reference: 1 watt, 4-ohms)

Dynamic Power: 64 watts into 4-ohms, all channels driven

Frequency Response: 20Hz to 20kHz, -3dB. Aux input used as source reference

Reference Supply Voltage: 14.4VDC

DVD/CD Player

Compatible Formats: DVD-R, DVD-RW, DVD+R, DVD+RW, CD-R, CD-RW, CD-DA, MP3, WMA, SVCD, VCD and Kodak Picture CD (JPEG)

Signal to Noise Ratio: \geq 95dBA

Dynamic Range: $>$ 95dB

Frequency Response: 20Hz to 20kHz, -3dB

Channel Separation: $>$ 60dB @ 1kHz

D/A Converter(s): 6-channel high performance 24-bit, 192kHz, multi-bit Sigma-Delta modulator. Supports sample rates from 8~192kHz.

Electronic Skip Protection (ESP): 16Mbit high-speed flash memory

Video

Format: NTSC, PAL (auto-detection)

Output: 1Vp-p (75-ohm)

Input: 1Vp-p (75-ohm)

FM Tuner

Tuning Range: 87.5MHz - 107.9MHz

Mono Sensitivity (-30dB): 9dBf

Quieting Sensitivity (-50dB): 15dBf

Alternate Channel Selectivity: 70dB

Signal to Noise Ratio @ 1kHz: 58dB

Image Rejection: 80dB

Stereo Separation @ 1kHz: $>$ 30dB

Frequency Response: 30Hz - 15kHz, -3dB

AM Tuner

Tuning Range: 530kHz - 1720kHz

Sensitivity (-20dB): 30uV

Signal to Noise Ratio @ 1kHz: 50dB

Image Rejection: 60dB

Frequency Response: 50Hz - 2kHz, -3dB

Monitor

Screen Size: 7.0" (Measured diagonally), 16:9 Widescreen

- 6.06" (154.1mm) W X 3.42" (87mm) H

Screen Type: TFT Liquid Crystal Display (LCD) active matrix

Response Time: 30mSec rise time, 50mSec fall time

Resolution:

- DVD/Composite Video in: 336,960 sub pixels, 1440 (W) X 234 (H)

Viewing angle:

- 65 degrees left or right
- 40 degrees up
- 65 degrees down

General

Auxiliary Input impedance: 10k

Power Supply: 11 to 16VDC, negative ground

Fuse: 10-amp, mini ATM type

DIN chassis dimensions: 7" X 7" X 2" (178mm x 178mm x 50mm)

** Specifications subject to change without notice.

12-MONTH LIMITED WARRANTY

AUDIOVOX CORPORATION (the Company) warrants to the original retail purchaser of this product that should this product or any part thereof, under normal use and conditions, be proven defective in material or workmanship within 12 months from the date of original purchase, such defect(s) will be repaired or replaced with new or reconditioned product (at the Company's option) without charge for parts and repair labor. To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), specification of defect(s), transportation prepaid, to the warranty center at the address shown below.

This Warranty does not extend to the elimination of car static or motor noise, to correction of antenna problems, to costs incurred for installation, removal, or reinstallation of the product, or damage to tapes, compact discs, accessories or vehicle electrical systems. This Warranty does not apply to

any product or part thereof which, in the opinion of the Company, has suffered or been damaged through alteration, improper installation, mishandling, misuse, neglect, accident, or by removal or defacement of the factory serial number/bar code label(s) or markings. THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID BY PURCHASER FOR THE PRODUCT.

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Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

U.S.A: Audiovox Corporation, 150 Marcus Blvd., Hauppauge, NY 11788, 1-800-323-4815

CANADA: Call 1-800-323-4815 for location of warranty station serving your area.

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